

Title (en)

APPARATUS AND METHOD FOR INSPECTING SIDE CHANNELS OF COMBINED SMARTCARD

Title (de)

VORRICHTUNG UND VERFAHREN ZUR INSPEKTION VON SEITENKANÄLEN FÜR KOMBINIERTER CHIPKARTE

Title (fr)

APPAREIL ET PROCÉDÉ POUR INSPECTER DES CANAUX LATÉRAUX D'UNE CARTE INTELLIGENTE COMBINÉE

Publication

**EP 3232375 A4 20171018 (EN)**

Application

**EP 15810884 A 20150625**

Priority

- KR 20140078276 A 20140625
- KR 2015006511 W 20150625

Abstract (en)

[origin: EP3232375A1] Disclosed are an apparatus and a method for inspecting side channels of a combined smartcard, capable of analyzing leaked power due to exposing a combined smartcard to electronic devices by using a contact terminal and a contactless RF circuit, and of preventing malfunction of the smartcard while reducing sensitivity to circuit noise. The apparatus for inspecting side channels of a combined smartcard, according to one embodiment, comprises: a contactless inspection unit for supplying power to the combined smartcard through induction coupling with the RF circuit of the combined smartcard, and for communicating with the combined smartcard; a contact inspection unit, which is connected to a portion of contact terminals of the combined smartcard, for measuring an electromagnetic device leakage signal of the combined smartcard generated as a result of the induction coupling; a signal analysis unit for receiving an input of the electromagnetic device leakage signal from the contact inspection unit and analyzing waveforms; and a control unit for controlling the operation of the contactless inspection unit, the contact inspection unit, and the signal analysis unit.

IPC 8 full level

**G06K 19/073** (2006.01); **G01R 31/28** (2006.01); **G06K 7/00** (2006.01); **G06K 19/077** (2006.01)

CPC (source: EP)

**G01R 31/2822** (2013.01); **G06K 19/07363** (2013.01); **G06K 7/0004** (2013.01); **G06K 19/07769** (2013.01)

Citation (search report)

- [A] KR 20110060569 A 20110608 - KOREA ELECTRONICS TELECOMM [KR]
- [A] US 2012228391 A1 20120913 - CHO ZANG-HEE [KR]
- [A] MESSERGES T S ET AL: "INVESTIGATIONS OF POWER ANALYSIS ATTACKS ON SMARTCARDS", USENIX WORKSHOP ON SMARTCARD TECHNOLOGY, XX, XX, 10 May 1999 (1999-05-10), pages 151 - 161, XP002905430
- See references of WO 2015199471A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**EP 3232375 A1 20171018**; **EP 3232375 A4 20171018**; **EP 3232375 B1 20201125**; KR 101528251 B1 20150611; WO 2015199471 A1 20151230

DOCDB simple family (application)

**EP 15810884 A 20150625**; KR 20140078276 A 20140625; KR 2015006511 W 20150625